

Patuxent Wildlife Research Center Science Brief for Resource Managers

<http://www.pwrc.usgs.gov>

Science Brief PWRC 2003-39

Date:	Contact:	Phone:	Email:	Address:
March 2003	Chandler Robbins	301-497-5641	chan_robbins@usgs.gov	USGS Patuxent Wildlife Research Center Laurel, MD 20708-4015

50-year changes in breeding bird populations

Description:

In the summers of 1949-1951, Chandler S. Robbins and Robert E. Stewart, Sr. conducted breeding bird censuses of representative habitats in Garrett County, Maryland, including virgin hemlock forest, scrub spruce bog, open hemlock-spruce bog, and lightly grazed pasture. The results were published in *Audubon Field Notes*, vols. 3 and 5 (1949, 1951), and used in Stewart and Robbins' *Birds of Maryland and the District of Columbia* (*North American Fauna* No. 62, 1958). Several of these study sites are in Maryland State Forests, State Parks, and State Recreation Areas, or owned by The Nature Conservancy. These sites were revisited 50 years after the original visit, the boundaries of each were documented by GPS readings, the vegetation was sampled by the same procedures as 50 years ago, and breeding bird populations were mapped using the same procedures as 50 years ago. Recommendations will be made for future management of these habitats. These Garrett County sites are of special interest because of the limited extent of those habitats in Maryland and the high breeding densities of some species that are otherwise among Maryland's rarest nesting birds (such as Blackburnian, Nashville, and Mourning Warblers, each one of which requires a different habitat).

Progress to Date:

2001 marked was the final summer of a 3-year study of changes in breeding bird populations in Garrett County, Maryland, based on census plots from 1949-51, Breeding Bird Survey results (1965-2001), and results of atlas field work (1983-87). During May and June 2001, Dowell and Robbins relocated additional study sites from 1949-51, made about ten visits to each to map nesting territories, and in August revisited them to conduct vegetation surveys and obtain GPS readings. We also obtained present and historic aerial photos (back to 1946) from all the study sites, courtesy of the Garrett Soil Conservation Office. Similar to the findings of the past two years,

most of the breeding species of 50 years ago are still present, although Nashville Warblers could not be found at any of the current sites. Additional survey work in 2002 revealed Nashville Warblers late in the spring migration period, but they all disappeared by June. The greatest changes were increases in northern songbirds associated with spruce and pine plantations (Brown Creeper, Red-breasted Nuthatch, Winter Wren, Golden-crowned Kinglet), but there were also a few southern species that had not been there 50 years ago (Acadian Flycatcher, Tufted Titmouse, Red-bellied Woodpecker).

Management Implications:

Most urgently, protection is needed for the maturing stands of northern conifers, as they have attracted large numbers of nesting Blackburnian Warblers as well as other northern species such as Golden-crowned Kinglets and Red-breasted Nuthatches.

Contacts:

Chandler S. Robbins
USGS Patuxent Wildlife Research Center
Laurel, MD 20708-4015
Phone: 301-497-5641
Email: chan_robbins@usgs.gov

For more information about Patuxent and our science, please visit our website at
<http://www.pwrc.usgs.gov>